

CLAIM AMENDMENTS

1. (currently amended): A temperature sensitive polymer having a lower critical solution temperature that changes during incubation in an aqueous solution or medium, which polymer is a ~~homopolymer of a hydrophobically modified hydroxyalkyl(meth)acrylamide or an interpolymer of a hydrophobically modified hydroxyalkyl(meth)acrylamide and up to 50 mole% of comonomers selected from acrylates, methacrylates, acrylamides, methacrylamides, N-vinyl pyrrolidone, vinyl lactates and vinyl ethers copolymer of (a) at least one hydroxyalkyl (meth)acrylamide (lactate)_n, wherein n represents the number of lactate units, n being at least 3, and (b) at least one hydroxyalkyl (meth)acrylamide (lactate)_n, wherein n is 0, 1 or 2.~~

2-9. (canceled)

10. (previously presented): The polymer of claim 1, having a lower critical solution temperature before incubation below human body temperature and a different lower critical solution temperature after incubation above human body temperature.

11. (previously presented): A controlled release system comprising the temperature sensitive polymer of claim 1 and an active ingredient.

12. (previously presented): The controlled release system of claim 11, wherein the polymer is in the form of a polymeric micelle in which a hydrophilic block is present which hydrophilic block comprises a polyalkyleneglycol.

13. (previously presented): The controlled release system of claim 11, wherein the system is in the form of a hydrogel.

14. (currently amended): The controlled release system of claim 13, wherein the hydrogel is an ABA block copolymer, wherein block A is a temperature sensitive polymer ~~of claim 1 having a lower critical solution temperature that changes during incubation in an~~

aqueous solution or medium, which polymer is a copolymer of (a) at least one hydroxyalkyl (meth)acrylamide (lactate)_n, wherein n represents the number of lactate units, n being at least 3, and (b) at least one hydroxyalkyl (meth)acrylamide (lactate)_n, wherein n is 0, 1 or 2 and B is a hydrophilic polymer.

15. (previously presented): A targeting drug composition, comprising a drug and particles of the controlled release system of claim 11.

16. (previously presented): The targeting drug composition of claim 15, which further comprises a homing device.

17. (canceled)

18. (currently amended): The polymer of ~~claim 8~~ claim 1, wherein under (a) n is an integer of 3 to 10.

19. (canceled)

20. (previously presented): The controlled release system of claim 14, wherein B is polyalkyleneglycol.

21. (previously presented): The controlled release system of claim 20, wherein B is poly(ethyleneglycol).

22. (previously presented): The targeting drug composition of claim 15, wherein the particles have an average diameter of less than 200 nm.

23. (previously presented): The targeting drug composition of claim 22, wherein the particles have an average diameter in the range of 10 to 100 nm.

24. (currently amended): The polymer of ~~claim 8~~ claim 1, wherein the mole % of (a) in (a) + (b) is 0.1%-99%.

25. (previously presented): The polymer of claim 24, wherein the mole % of (a) in (a) + (b) is 1%-50%.